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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,154	06/22/2001	Ramesh Wariar	112713-131	8167

29200 7590 08/22/2003

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EXAMINER

MACHUGA, JOSEPH S

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 08/22/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,154

Applicant(s)

WARIAR ET AL.

Examiner

Joseph S. Machuga

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 and 5. 6) ☐ Other: ____.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the hemodialysis machine with the control device attached to the patient, communication cable, cordless interface, display, blood pump and line clamp recited in claims 8,9, 17, 23-26 and 35 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13,14 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 13 and 19 should positively recite the sterile pad.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,2, 7-10, 15, 17,18 and 23-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 99/24145. Regarding claim 9 and 25 the control device is attached to the patient through lines 13, 17, 42A and 42B as clearly illustrated in Figure 1.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 27-29, 30-34, 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/24145. As illustrated in Figures 2 and 3 the sensor includes a cutout portion enabling it to be added to the patient after the needle has been inserted. Given this, it would have been obvious to one of ordinary skill in the art to position the sensor on the patient *after* the needle is in place since it is one of two obvious and readily apparent possibilities and since this arrangement would allow for a clear unobstructed view of the vein which would not be the case if the sensor was already in place.

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4. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/24145 as applied to claim 33 above, and further in view of either WO 97/10013, Shintani et al or JP 104233,

5. WO 97/10013, Shintani et al and JP 104233 all teach closing a control a valve in response to blood leakage. WO 99/24145 teaching that if leakage is detected corrected action to minimize blood loss should be taken (column 7, lines 15-18.)

6. It would have been obvious to one of ordinary skill in the art to shut off a clamp/valve in the fluid line of the WO 99/24145 device when a leak is detected given that WO 99/24145 suggests that corrective actions should take place in response to blood loss and given that it is old and well known to close a clamp/valve given the teachings of either WO 97/10013, JP104233 or Shintani et al.

7. Claims 3, 4, 8, and 9, 16, 19, 20, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/24145 in view of Cox et al (5579765.)

8. WO 99/24145 discloses a device for detecting needle dislodgement during hemodialysis. As illustrated in figures, the device includes either an adhesive cloth patch 40 having spaced apart resistance members A, B or a layered sensor consisting of spaced apart conductors separated by a hydrophilic cloth layer. The presence of blood caused by a dislodged needle soaks the cloth and completes the circuit. The sensor then triggers the controller to stop the blood pump (page 7, lines 8-18.) Not disclosed by this reference is the loop type resistive sensor.

9. Cox et al discloses a blood leakage sensor. The reference teaches that it is old and well known to use two loop type resistance sensors mounted on a layer of gauze to detect the presents of blood. The reference also teaches that it is old and well known to mount the alarm and transmitter on the patient. This allows the patient and attendants to quickly detect if there is a problem.

10. It would have been obvious to one of ordinary skill in the art to use loop type resistive sensors mounted on a layer of gauze to detect the presents of blood in place of the resistors in the WO 99/24145 device given Cox et al's teaching that this arrangement is old and well known in the art and since this modification would simplify the design. To locate the alarm and or transmitter on the patient would have been obvious to one of ordinary skill in the art given Cox et al's disclosure that it's old and well known and enables the patient or attendant to quickly notice a problem.

11. Claims 5, 6, 11-14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/24145 in view of Johnson (5469145.)

12. WO 99/24145 discloses a device for detecting needle dislodgement during hemodialysis. As illustrated in figures, the device includes either an adhesive cloth patch 40 having spaced apart resistance members A, B or a layered sensor comprising two spaced apart conductors separated by a hydrophilic cloth layer. The presence of blood soaks the cloth and completes the circuit. The sensor then triggers the controller to stop the blood pump (page 7, lines 8-18.) Not disclosed by this reference is the capacitive sensor.

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13. Johnson discloses a fluid detector. As illustrated in Figures 10-13 the device included a holder (122) and a capacitive sensor. The sensor assembly is releasably attached to the outer layer of the diaper. The device measures the change in capacitance of the cloth layer to record changes in moisture. This feature makes the sensor reusable since it never comes in contact with the fluid.

14. Given Johnson's disclosure it would have been obvious to one of ordinary skill in the art to use a capacitive type sensor in WO 99/24145's device mounted on gauze or similar material to measure the presents of blood without direct contact thereby making the sensor reusable.

15. Regarding claim 38, as illustrated in Figures 2 and 3 of WO 99/24145 the device includes a cutout portion enabling the sensor to be added *after* the needle has been inserted. Given this, it would have been obvious to one of ordinary skill in the art to position the sensor on the patient *after* the needle is in place since it is one of two obvious and readily apparent possibilities and since this arrangement would allow for a clear unobstructed view of the vein which would not be the case if the sensor was already in place on the patient.

16. Claims 1, 2, 4, 5, 7-10, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al (5579765) in view of WO 99/24145.

17. Cox et al discloses a capacitance type blood sensor. The device includes a control device mounted on the patient. The device is used to detect external bleeding.

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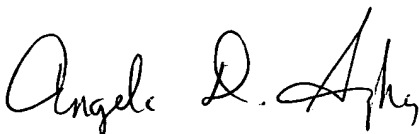
WO 99/24145 discloses a dialysis machine have a blood detector that surrounds the needle. The feature is added to prevent catastrophic blood loss. Given WO 99/24145's disclosures it would have been obvious to one of ordinary skill in the art to use Cox et al's monitor in a dialysis machine given the similar structure and similar intended use.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Seiger (2127538), Bandeian Jr. et al (6445304), Zimmet (5947910) are cited to show related sensors. Ward et al (4941882) and Eliassen et al (6332874) are cited to show related retainers.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Machuga whose telephone number is 703-305-6184. The examiner can normally be reached on Monday-Friday; 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D Sykes can be reached on 703-308-5181. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700



Joseph S. Machuga
Examiner
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